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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/621,651	07/21/2000	Naoki Nishi	P00,1021	4631

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EXAMINER

TILLERY, RASHAWN N

ART UNIT	PAPER NUMBER
2612	6

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/621,651

Applicant(s)

NISHI, NAOKI

Examiner

Rashawn N Tillery

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

Figures 5A-5C, 6A-6D and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirota (US5239192).

Regarding claim 1, Hirota discloses, in figures 6, 7 and 8, a charge transfer device comprising:

a transfer channel (4); and

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plural pairs of two-layered transfer electrodes (3) arranged along a transfer direction on the transfer channel, wherein two-phase driving pulses are applied to the plural pairs of two-layered transfer electrodes (see col. 3, line 63 to col. 4, line 17), and the transfer channel below a paired two-layered transfer electrode disposed at the last portion in the transfer direction has a first area (under pulse H1/2T), a second area (under pulse H1/2S) which is provided at the downstream of the first area in the transfer direction and has a deeper potential level than the first area, and a third area (under V_{hog}) which is provided at the downstream of the second area in the transfer direction and has a deeper potential level than the second area.

The examiner notes that since Applicant is not claiming that the first, second and third areas are directly under the transfer electrodes, simply that they are "below a paired two-layered transfer electrode," Hirota's teachings in figure 8, broadly interpreted, could be read on Applicant's claim language.

Regarding claim 2, Hirota discloses, in figure 8, transfer electrodes which are independently provided above the first area, the second area and the third area (see examiner's notes above).

Regarding claim 3, Hirota discloses common driving pulses are applied to the independently provided transfer electrodes. The examiner notes that Hirota's driving pulses are "common" in that they are all driving pulses. Applicant is not claiming that the driving pulses have the same amplitude.

Regarding claim 4, Hirota discloses commonly provided transfer electrodes are provided above the second and third area. The examiner notes that transfer electrodes

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are "commonly provided" since they are all arranged on a transfer channel; and the transfer electrodes are also provided "above" the second and third areas.

Regarding claim 5, see examiner's notes in claim 3.

Regarding claim 6, Hirota discloses, in figure 6, the transfer channel has at the last portion in the transfer direction an area which is gradually tapered at the downstream side, and at least the third area is disposed so as to be overlapped with the gradually-tapered area.

Regarding claim 7, Hirota discloses, in figures 6, 7 and 8, a charge transfer device comprising:

An image pickup portion (see col. 3, line 57) which contains plural photosensors and converts input light to electrical signals by the plural photosensors;

a transfer channel (4) for transferring the charges thus photoelectrically converted in the image pickup portion; and

plural pairs of two-layered transfer electrodes (3) arranged along a transfer direction on the transfer channel, wherein two-phase driving pulses are applied to the plural pairs of two-layered transfer electrodes (see col. 3, line 63 to col. 4, line 17), and the transfer channel below a paired two-layered transfer electrode disposed at the last portion in the transfer direction has a first area (under pulse H1/2T), a second area (under pulse H1/2S) which is provided at the downstream of the first area in the transfer direction and has a deeper potential level than the first area, and a third area (under V_{hog}) which is provided at the downstream of the second area in the transfer direction and has a deeper potential level than the second area.

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The examiner notes that since Applicant is not claiming that the first, second and third areas are directly under the transfer electrodes, simply that they are "below a paired two-layered transfer electrode," Hirota's teachings in figure 8, broadly interpreted, could be read on Applicant's claim language.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakashiba, Levine, Dischert et al, Miwada and Kochi et al.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

RNT


WENDY R. GARBER
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